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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/667,947

09/22/2003

Wayne T. DeJarnette

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EXAMINER

BURGESS, JOSEPH D

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/667,947	<b>Applicant(s)</b> DEJARNETTE ET AL.	
	<b>Examiner</b> JOSEPH BURGESS	<b>Art Unit</b> 4114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Status of Claims***

1. This action is in reply to application 10/667947 filed on 09/22/2003.
2. Claims 1-29 are currently pending and have been examined.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 4114

4. Claims 1-3, 5-9 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims recite various "means for" language. However, the specification does not specifically enumerate the particular structure or acts that constitute the "means for" as required by 35 U.S.C. 112, 6th paragraph. Therefore, the scope of the claims is unclear.
5. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim recites the limitation "said super orders" in the 6<sup>th</sup> paragraph. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim does not possess the proper claim format of preamble, transitional phrase and body. Therefore, it is unclear what the applicant is claiming. For the purposes of this examination, the examiner will assume that the limitations of this claim are similar to previous claims.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
8. Claims 1-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Art Unit: 4114

9. Claims 1-9, 28, and 29 are directed to a breakaway interface. However, it is noted that the specification does not disclose any specific corresponding structure or equivalents thereof. Therefore, these claim limitations can reasonably be interpreted as computer program modules or software per se. The claims constitute computer programs representing computer listings per se. Such descriptions or expressions of the programs are not physical "things". They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional interrelationships between the computer program and the rest of the computer, that permits the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.
10. Claims 10-27 are directed to a method. However, the recited steps of the method are held to be non-statutory subject matter because the recited steps of the method are (1) not tied to another statutory class (such as a particular apparatus) or (2) not transforming the underlying subject matter (such as an article or materials) to a different state or thing.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 4114

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
13. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short, et al. (US 2004/0086202 A1) in view of Sitka, et al. (US 2001/0011336 A1) in further view of Hilton (US 5,452,416 A).

**Examiner's Note:** The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

14. **Claim 1:**

Short, as shown, discloses the following limitations:

- *means for receiving an image sequence from said radiological imaging machine* (see at least paragraph 0016, i.e. imaging equipment interface receives images from medical imaging equipment);
- *means for matching said anatomically associated images with corresponding individual work orders* (see at least paragraph 0021, i.e. worklist and workflow);

Art Unit: 4114

Short does not disclose *means for transmitting said matched anatomically associated image sequences and said corresponding individual work orders to said picture archive and communication system*. Sitka, however, in at least paragraph 0004 discloses utilizing the PACS system for archiving and retrieving images. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

The combination of Short/Sitka does not specifically disclose *means for dividing said image sequence into separate, anatomically associated image sequences*. Hilton, however, in at least column 2, lines 40-47 discloses, "...each image group is partitioned into one or more ordered image series, each ordered image series including a succession of images which illustrate incrementally registered aspects of an anatomical target..." It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because, "...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves" (Hilton, column 2, lines 20-24).

**15. Claim 2:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Short, in at least paragraph 0003 discloses *a means to accept said individual work orders from said radiology accounting and billing information system*.

Art Unit: 4114

**16. Claim 3:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Short, in at least paragraph 0021 discloses *means to convey said single work orders to said radiological imaging machine*.

**17. Claim 4:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Sitka, in at least paragraph 0019 discloses *said single work orders are in compliance with DICOM standards*. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

**18. Claim 5:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said dividing means further comprises a means for performing histogram analysis*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to segment images by using histogram analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to divide images by using histogram analysis because this would provide a means to archive, retrieve, and display images more efficiently.

**19. Claim 6:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said dividing means further*



Art Unit: 4114

*comprises a means for executing peak finding techniques.* However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to segment images by using peak finding techniques. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to divide images by using peak finding techniques because this would provide a means to archive, retrieve, and display images more efficiently.

**20. Claim 7:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said dividing means further comprises a means for performing moments of order analysis.* However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to segment images by using moments of order analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to divide images by using moments of order analysis because this would provide a means to archive, retrieve, and display images more efficiently.

**21. Claim 8:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Sitka, in at least paragraph 0002 discloses *said dividing means further comprises a means for evaluating information from at least one previous analysis* (i.e. PACS allows radiologists to retrieve and display previous patient studies). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

Art Unit: 4114

**22. Claim 9:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Hilton, in at least column 2, lines 16-24 discloses *said dividing means further comprises a means for identifying and evaluating series information* (i.e. automated system for storage, retrieval, and presentation of medical image sequences which allows manipulation of images). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because, "...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves" (Hilton, column 2, lines 20-24).

**23. Claim 10:**

Short, as shown, discloses the following limitations:

- *assigning said one of said individual radiological images to an appropriate one of said plurality of associated studies and work orders* (see at least paragraph 0021).

Short does not disclose *receiving said single radiological image sequence in electronic form*. Sitka, however, in at least paragraph 0002 discloses that digital (e.g. electronic) images can be retrieved in the form of a series for a particular patient. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

The combination of Short/Sitka does not specifically disclose *analyzing a one of said individual radiological images within said single radiological image sequence to determine an associated anatomical region*. Hilton, however, in at least column 2, lines 40-47 discloses, "...each image group is partitioned into one or more ordered image series, each ordered image series including a

Art Unit: 4114

succession of images which illustrate incrementally registered aspects of an anatomical target...”

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because, “...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves” (Hilton, column 2, lines 20-24).

**24. Claim 11:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Sitka, in at least paragraph 0002 discloses *said single radiological image sequence is received in digital electronic form*. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, “...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure” (Short, paragraph 0008).

**25. Claim 12:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing comprises histogram analysis*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using histogram analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using histogram analysis because this would provide a means to archive, retrieve, and display images more efficiently.

Art Unit: 4114

**26. Claim 13:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing comprises moments of order analysis*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using moments of order analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using moments of order analysis because this would provide a means to archive, retrieve, and display images more efficiently.

**27. Claim 14:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing comprises peak finding techniques*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using peak finding techniques. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using peak finding techniques because this would provide a means to archive, retrieve, and display images more efficiently.

**28. Claim 15:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Sitka, in at least paragraph 0002 discloses *said analyzing comprises evaluating information from previous analysis steps* (i.e. PACS allows radiologists to retrieve and display previous patient studies). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures

Art Unit: 4114

can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure” (Short, paragraph 0008).

**29. Claim 16:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Hilton, in at least column 7, lines 34-67 discloses *said analyzing comprises evaluating series information to distinguish multiple procedures* (i.e. system distinguishes two different image series of two different axial views from each other). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because, “...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves” (Hilton, column 2, lines 20-24).

**30. Claim 17:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Short, in at least paragraphs 0021-0022 discloses *the step of recognizing compound work orders subsequent to said receiving step, and, responsive thereto, electing whether to perform said analyzing step* (i.e. worklist content can dictate multiple exam mode which allows for acquisition of all or a subset of imaging procedures).

**31. Claim 18:**

Short, as shown, discloses the following limitations:

- *receiving said radiological examination orders* (see at least paragraph 0021, i.e. worklist is received from HIS system or entered directly into acquisition workstation);
- *conveying said radiological examination orders to said imaging apparatus for imaging* (see at least paragraph 0021);

Art Unit: 4114

- *delivering image sequences corresponding to said unaffiliated radiological examination orders to a storage system (see at least paragraph 0021);*
- *assigning said at least one individual radiological image to an appropriate one of said plurality of associated studies and work orders based upon said analyzing and determining step (see at least paragraph 0021);*
- *transmitting said assigned at least one individual radiological image and said appropriate one of said plurality of associated studies and work orders to said storage system (see at least paragraph 0021).*

Short does not disclose *generating image sequences having at least one individual radiological image*. Sitka, however, in at least paragraph 0002 discloses that when a patient is imaged by a medical modality a series of images (e.g. at least one image) is generated. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

The combination of Short/Sitka does not specifically disclose *analyzing said at least one individual radiological image within said image sequences corresponding to said super orders to determine an associated study*. Hilton, however, in at least column 8, lines 7-67 discloses individual images are picked and assembled together to be analyzed. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because, "...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves" (Hilton, column 2, lines 20-24).

Art Unit: 4114

**32. Claim 19:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above.

In addition, Short, as shown, discloses the following limitations:

- *distinguishing said radiological examination orders that are unaffiliated with other radiological examination orders from radiological examination orders that are affiliated with other radiological examination orders (see at least paragraphs 0021-0022, i.e. single exam mode vs. multiple exam mode);*
- *assembling affiliated radiological examination orders into a super order responsive to said distinguishing (see at least paragraph 0022, i.e. in multiple exam mode all imaging procedures can be selected).*

**33. Claim 20:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above.

In addition, Short, as shown, discloses the following limitations:

- *said conveying step further comprising conveying said unaffiliated radiological examination orders and said super orders to said imaging apparatus for imaging responsive to said distinguishing and said assembling steps (see at least paragraphs 0021-0022, i.e. worklist is entered in single or multiple exam mode);*
- *said at least one individual radiological image is generated corresponding to said unaffiliated radiological examination orders and said super orders (see at least paragraphs 0021-0022, i.e. images are generated in single or multiple exam mode).*

**34. Claim 21:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above.

In addition, Short, as shown, discloses the following limitations:

- *said radiological examination orders are received from said radiological information system (see at least paragraph 0003);*

Art Unit: 4114

- *said image sequences and said unaffiliated radiological examination orders are delivered to said picture archive and communication system (see at least paragraph 0003);*
- *said at least one individual radiological image and said appropriate one of said plurality of associated studies and work orders are transmitted to said picture archive and communication system (see at least paragraph 0003).*

**35. Claim 22:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing step further comprises histogram analysis*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using histogram analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using histogram analysis because this would provide a means to archive, retrieve, and display images more efficiently.

**36. Claim 23:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing step further comprises moments of order analysis*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using moments of order analysis. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using moments of order analysis because this would provide a means to archive, retrieve, and display images more efficiently.



Art Unit: 4114

**37. Claim 24:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. The combination of Short/Sitka/Hilton does not specifically disclose *said analyzing step further comprises peak finding techniques*. However, examiner takes **Official Notice** that it is old and well-known in the imaging arts to analyze images by using peak finding techniques. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the imaging workflow system of Short/Sitka/Hilton with the ability to analyze images by using peak finding techniques because this would provide a means to archive, retrieve, and display images more efficiently.

**38. Claim 25:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Sitka, in at least paragraph 0002 discloses *said analyzing step further comprises analysis of information from at least one previous analysis step* (i.e. PACS allows radiologists to retrieve and display previous patient studies). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the digital image management system as disclosed by Sitka with the imaging workflow system of Short because, "...image acquisition data for different procedures can be obtained, thereby avoiding the need to sequentially obtain image data for a given procedure" (Short, paragraph 0008).

**39. Claim 26:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Hilton, in at least column 7, lines 34-67 discloses *said analyzing step further comprises evaluating series information to distinguish multiple procedures* (i.e. system distinguishes two different image series of two different axial views from each other). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the automated medical image system of Hilton with the imaging workflow system of Short because,

Art Unit: 4114

“...affords the user with a flexible and responsive set of functions that permit direct manipulation of the modes of image presentation and of the presented images themselves” (Hilton, column 2, lines 20-24).

**40. Claim 27:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Short, in at least paragraphs 0006 discloses *said step of determining an associated region further comprises determining an associated anatomical region.*

**41. Claim 28:**

With regard to the limitations of *in combination with medical imaging equipment normally operating independently of a stand-alone radiological information system, a breakaway interface disposed between the radiological information system and the medical imaging equipment, thereby facilitating conventional use of the medical imaging equipment for multi-anatomical or multi-procedural studies for generating a series of anatomical images under a single work order and for simultaneously producing respective individual work orders which are matched to corresponding anatomical images, and which are inputted into the radiological information system for management control, tracking, accounting and/or billing purposes*, see rejections of claims 1-3 above .

Art Unit: 4114

**42. Claim 29:**

The combination of Short/Sitka/Hilton discloses the limitations as shown in the rejections above. In addition, Short, discloses *a picture archive and communication system (PACS)* (see at least paragraph 0003) *and means for transmitting individual work orders and the anatomical images into the PACS* (see at least paragraph 0021).

**Conclusion**

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **JOSEPH BURGESS** whose telephone number is **(571)270-5547**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **JAMES REAGAN** can be reached at **(571)272-6710**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **(866)217-9197** (toll-free).

Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks  
Washington, D.C. 20231**

or faxed to **571-273-8300**. Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window**:

Application/Control Number: 10/667,947

Page 19

Art Unit: 4114

**Randolph Building**

**401 Dulany Street**

**Alexandria, VA 22314.**

/JOSEPH BURGESS/

01/12/2009

Examiner

Art Unit 4114

/JAMES REAGAN/

Supervisory Patent Examiner, Art Unit 4114